STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

BEATRICE ASSOCIATES,	)	
	)	
Complainant,	)	
vs.	)	No. 03-0763
	)	
COMMONWEALTH EDISON,	)	
	)	
Respondent.	)	

COMPLAINANT'S BEATRICE ASSOCIATES DIRECT TESTIMONY IN ITS COMPLAINT AGAINST COMMONWEALTH EDISON

As to the Electrical Metering of 1550 South Blue Island, Chicago, Illinois for the period from July 1999, to January 2004.

ROBERT HABIB

Attorney No. 13519
ROBERT HABIB
Attorney for Complainant
77 W. Washington St.
Suite 411
Chicago, Illinois 60602
(312) 201-1421

STATE OF ILLINOIS
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BEATRICE ASSOCIATES,	)	
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vs.	)	No. 03-0763
	)	
COMMONWEALTH EDISON,	)	
	)	
Respondent.	)	

DIRECT TESTIMONY OF BENJAMIN MILLER

1. Please state your name.

ANSWER: Benjamin D. Miller

2. Where do you reside?

ANSWER: Deerfield, Illinois

3. What is your profession?

ANSWER: Electrical Engineer

4. Where did you get your degree?

ANSWER: I received a Bachelor of Science, B.S.E.E., in electrical engineering in 1972 from Illinois Institute of Technology.

5. Did you specialize in any specific area?

ANSWER: In 1972, all electrical engineering graduates majored either in power, or in electronics. I specialized in power.

6. Are you licensed?

ANSWER: I am a licensed professional engineer in the State of Illinois. To achieve this, you have to have six years of professional experience, and you have to pass an exam.

7. Did you bring a curriculum vitae?

ANSWER: Yes.

Showing your C.V., it is marked as Exhibit 1. This shows you were with Remcor Products from 1973 to 1995, in which your last position was Vice President of Engineering, managing a department of 22 technicians.

It also shows that since 1995 you have been President and owner of B. Miller Engineering, a consulting firm in electrical engineering.

The C.V. also shows you are a member of six professional engineering societies.

The C.V. also shows you are adjunct faculty with Oakton Community College.

It also shows you are the holder of 18 electrical engineering patents.

It also shows you have authored eight Publications/ Presentations over the last six years.

Finally, it shows you have been retained as an expert witness in engineering matters between 15-20 different matters.

8. When were you first retained in this matter?

ANSWER: My initial contact was with Brian Flisk of Beatrice Associates in March of 2002 regarding a different matter involving the 1550 South Blue Island building.

However, my first involvement in regards to the accuracy of the meter of 1550 South Blue Island was in March of 2003.

9. What were you asked to do?

ANSWER: To determine whether the Commonwealth Edison meter at 1550 South Blue Island was measuring usage for Beatrice only or whether it was also measuring usage on Beatrice's meter for customers other than Beatrice.

10. What did you find at the building in regards to the meter?

ANSWER: Beatrice has two revenue meters: A three-phase meter and a single-phase meter. The three-phase meter is also measuring electrical usage by two cell phones - - Nextel & U.S. Cellular. Therefore, Beatrice is being billed for Nextel's and U.S. Cellular's usage in addition to Beatrice's own usage.

10. Did you prepare a report?

ANSWER: Yes.

Showing you Exhibit 2, it is the Engineering Report of the electrical metering at 1550 South Blue Island dated April 4, 2003.

12. Does this report consisting of eight pages of findings, diagrams, and photographs describe your investigation and conclusions?

ANSWER: Yes.

13. What was your next involvement with the 1550 South Blue Island building?

ANSWER: Between 3/4/03 and 4/3/03 and using data loggers, I measured the total consumption of electrical usage on both the single phase and three-phase meters.

14. What are data loggers?

ANSWER: These are equipment/instruments designed to measure electrical consumption which were calibrated and verified with an accuracy of 1%.

15. What did you find?

ANSWER: The single-phase meter, which measures only Beatrice's usage, showed 144.5 total kilometer-hours used over the one month period. The three-phase system, which includes Nextel and U.S. Cellular, showed total kilometer-hours of 6.550. The vast bulk of the usage measured by the meter - - between 90-95% - - was from Nextel and U.S. Cellular.

However, Beatrice also was being billed.

16. Did you prepare a report as to the investigation?

ANSWER: Yes.

17. Showing you what is marked as Exhibit 3 is an Engineering Report on electrical metering at the 1550 South Blue Island building dated July 2, 2003, do you recognize it?

ANSWER: Yes. This report contains my investigation, findings, and conclusions as of July 2, 2003.

18. What was your next involvement with the 1550 South Blue Island building?

ANSWER: I conducted another electrical survey at the 1550 South Blue Island building from November 21st to December 23, 2003.

19. Had there been any changes in the condition of the building since July of 2003?

ANSWER: Yes, Edison had rewired the meter to remove the Nextel and U.S. Cellular loads from the Beatrice meter. With the Nextel and U.S. Cellular loads removed, the single-phase meter now showed a monthly usage of 20 kilometer-hours.

On the three-phase test, it measured zero, showing no electrical load on the three-phase system during the test period.

There was a consistent registration error of the single-phase meter, which was evident during the testing.

20. Did you prepare a report of your findings?

ANSWER: Yes.

21. Showing you what is marked as Exhibit 4, Engineering Report of Electrical Metering of 1550 South Blue Island building dated January 7, 2004, does this report describe your investigation, findings, and conclusions?

ANSWER: Yes.

22. At this point, in January of 2004, what conclusions did you discover to a reasonable degree of engineering certainty?

ANSWER: The obvious conclusion, as demonstrated by Edison's re-wiring in the Fall of 2003 to remove the Nextel and U.S. Cellular loads, was that Beatrice had been billed for Nextel and U.S. Cellular's usage until December of 2003.

Furthermore, Nextel's and U.S. Cellular's usage had constituted at least 90-95% of the usage recorded on the three-phase meter.

23. In your visit to 1550 South Blue Island building, what electrical usage did you notice?

ANSWER: The building itself was vacant with lights that are used infrequently. It had no heat and no air conditioning system. Any usage by Beatrice itself is minimal.

24. What other conclusions had you come to?

ANSWER: Given the registration error noticed in the test of the single-phase meter, I believed there may also be a problem with the current transformer operated by Edison which requires further testing.

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COMMONWEALTH EDISON,	)	
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DIRECT TESTIMONY OF BRIAN FLISK

1. Please state your name.

ANSWER: Brian Flisk

2. You are managing agent of Beatrice Associates.

ANSWER: Yes.

3. Beatrice is the customer for Commonwealth Edison the building located at 1550 South Blue Island?

ANSWER:

4. Prior to July of 1999, who was located there?

ANSWER: It was a refrigerated produce terminal.

5. Since July of 1999, what has happened at the building?

ANSWER: The last tenant moved out in July of 1999. We have had no tenants since July of 1999.

6. Has Beatrice used the building for any purpose?

ANSWER: We did allow Nextel & U.S. Cellular to operate their cell-phone towers from our premises. They were to pay for their own electricity. Otherwise, the building has been totally vacant.

7. Has there been any heat supplied to the building?

ANSWER: No.

8. Has there been any air conditioning?

ANSWER: No.

9. What electrical usage has occurred at the building?

ANSWER: The lights are infrequently turned on. Otherwise, the usage is a sump pump which runs occasionally to remove water from the basement. All of the previously existing electrical refrigeration operation has been disengaged.

10. Since July of 1999, you have received electrical bills from Commonwealth Edison.

ANSWER: Yes.

11. Showing you Exhibit 5, there is a table showing electrical bills received from Commonwealth Edison from July of 1999 until January 2004. What did those bills average, prior to December, 2003.

ANSWER: In 1999, they were averaging $17-$18,000.00. In 2000, and 2001 they were average $4,000. In 2002 and 2003 they average over a $1,000 a month.

12. In December of 2003, what did the bill show?

ANSWER: $189.33

13. What accounted for the dramatic drop?

ANSWER: Edison had removed Nextel and U.S. Cellular loads from our meter.

14. Did you retain an expert Benjamin Miller?

ANSWER: Yes, to investigate whether we were being billed for other customers' usage and what our actual bill should be.

Miller measured usage in 2003 during March, April and November, and found Nextel and U.S. Cellular's usage to be 90-95% of the bills we had been receiving.

The bills we received in December 2003, and January 2004, which have been paid were $189.33 and $353.15 respectively.

15. Were the months of December 2003, and January 2004 typical of you electrical usage since July 1999?

ANSWER: Yes, the building has been in the same vacant condition without heat or air conditioning since July 1999.

Therefore, we believe our monthly bills should have averaged $300.00 per month.

16. Assuming you were to have been billed at $300.00 per month since July 1999, then your total bill from July 1999, through November 2003 should have been $15,600.00?

ANSWER: Correct.

17. Have you made payments to Edison during this period?

ANSWER: We have made all correct payments since December 2003, when the Nextel, and U.S. Cellular loads were removed from our meter. We also made a payment of $15,000.00, on March 14, 2003 check number #3129.

18. What relief are you requesting of this Consumer?

ANSWER: The bill we received in January 2004, showed $259,569.68, owed. This bill included $148,457.36, in late charges, and the remainder was usage billed from July 1999 for Nextel, and U.S. Cellular.

We are asking that this bill in the amount of $259,569.68, be removed from our account.

B. MILLER
ENGINEERING

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ENGINEERING REPORT

Electrical Metering Investigation
Report #3

1550 S Blue Island
Chicago, IL

Jan 7, 2004

Prepared By:
Benjamin D. Miller, PE

This will report the results of an electrical survey at the subject facility from Nov 21 – Dec 23, 2003. This was done after the site was rewired by Commonwealth Edison to remove two cell-site loads from the Beatrice meter, as described in previous reports. Two data loggers were connected to monitor the Beatrice electrical consumption on the single-phase and the three-phase systems. The data logger accuracy is within +/- 1%.

SINGLE-PHASE RESULTS

A previous report dated July 2, 2003 contains the results of similar testing performed in March, 2003, prior to the wiring modifications. The single-phase revenue meter was changed after that test. The new meter is S/N BUZW140017993.

Data from the March test and this December test are presented below for comparison purposes. The attached graphs show the usage pattern during this test.

There were only two loads on the single-phase system:

- A lighting load totaling approximately 1 kW was recorded on 11/21 for several hours when the data loggers were installed and Com Ed was working in the vault. The lights registered again briefly on 12/3 at 2:44 pm, and on 12/23 at 10:30 am when the data loggers were removed. These lights are in the vault and the surrounding hallways.
- An unknown motor load of approximately 1 kW (1 – 1.5 hp) started cycling at 2:44 pm on 12/3 and continued for the duration of the test. The cycle rate was variable, and the operating time was relatively short. This has the characteristics of an air compressor or pump.

During the March test, only the vault lights and a water pump were present on the single-phase system.

The maximum demand during this test was 1.02 kW, which occurred on the first day of testing when the vault lights were on. The maximum demand in March was 1.57 kW.

Data logger

	Nov/Dec 2003 test	March 2003 test
Duration	32 days	30 days
Total energy	20.0 kWh	144.5 kWh
Maximum 30-minute demand	1.02 kW	1.57 kW

Revenue meter

Start reading	0011	0899
End reading	0014	0925
Net for test period	3	26
CT multiplier	120	120
Meter registration	360 kWh	3,120 kWh

The single-phase meter does not agree with the measured kWh in this facility. During this test, the meter registered 18 times higher (360 kWh vs. 20 kWh). During the March 2003 test, it read 22 times higher (3,120 vs. 144.5).

There is a possible reading error of plus or minus one digit on the lowest dial of a meter. Normally this is insignificant when the change in reading covers several dials. Because the meter only registered 3 digits on the lowest dial in this case, however, the reading error could be almost 33%. Therefore, the registration errors observed during the two tests are most likely the same.

Since the same registration error existed with different meters, the problem may not be with the meters themselves. It is possible that there is a problem with a current transformer (CT). I observed one test by Com Ed to confirm the CT burden capability, but they did not test for ratio accuracy. It is also possible that the meters are reading correctly but using an additional dial factor which I am unaware of, since nothing is marked on the data plates. I have noted this lack of data plate marking in past reports as well.

THREE-PHASE RESULTS

Both the revenue meter and the data logger measured zero kWh, indicating that there was no electrical load on the three-phase system during the test period.

CONCLUSIONS

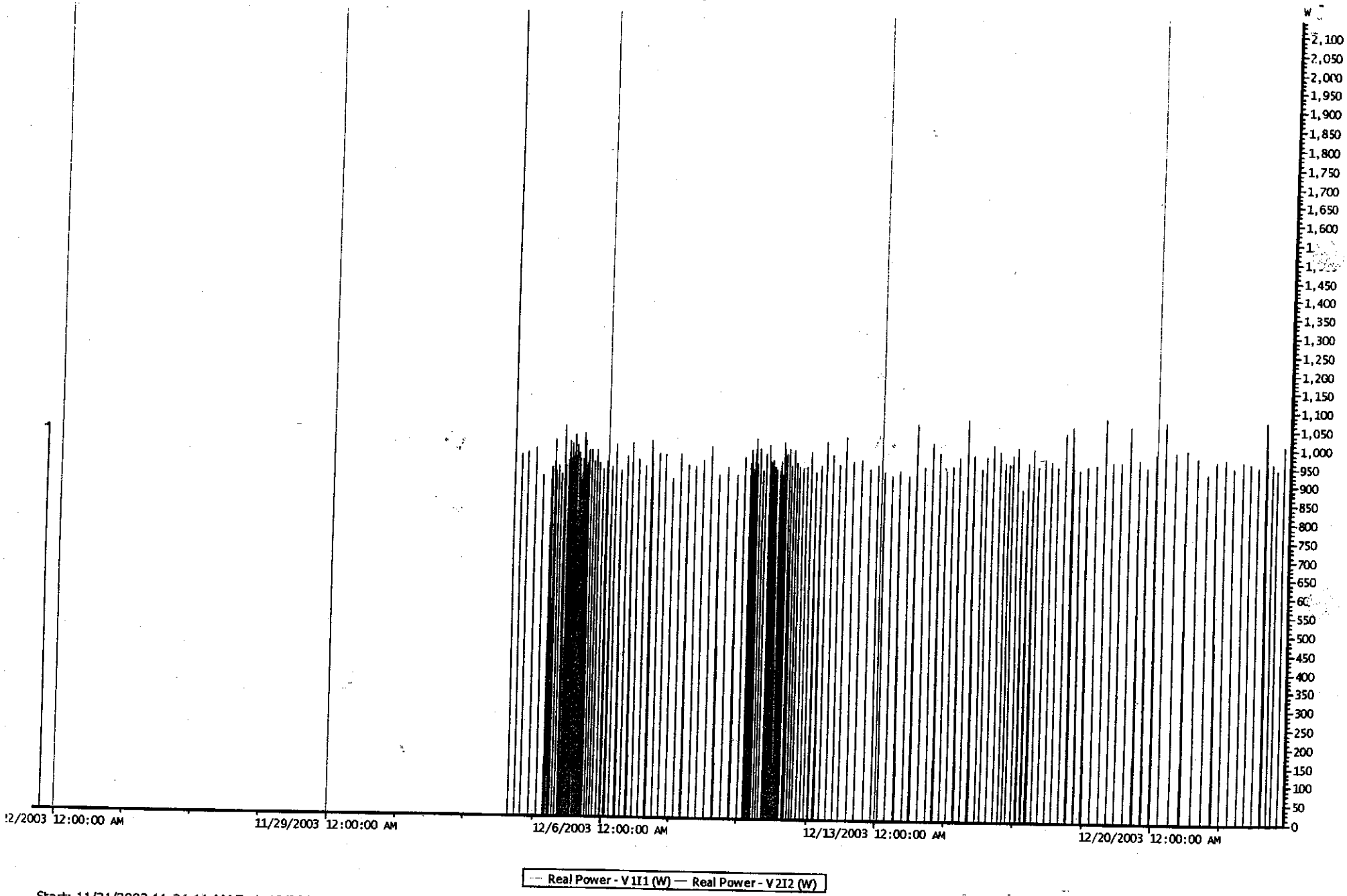
Beatrice had no three-phase loads during this test. This confirms that the cell tower loads have now been removed from the Beatrice meter.

The only Beatrice electrical loads are those on one leg of the single-phase system. These include a temporary pump which operated during the March test, an unknown motor load during the most recent test, and a group of vault lights which are energized infrequently.

There is a consistent registration error on the single-phase revenue meter evident during two different tests. Resolving this will require further investigation, possible CT ratio testing, or an explanation of the meter scale factor by Com Ed.

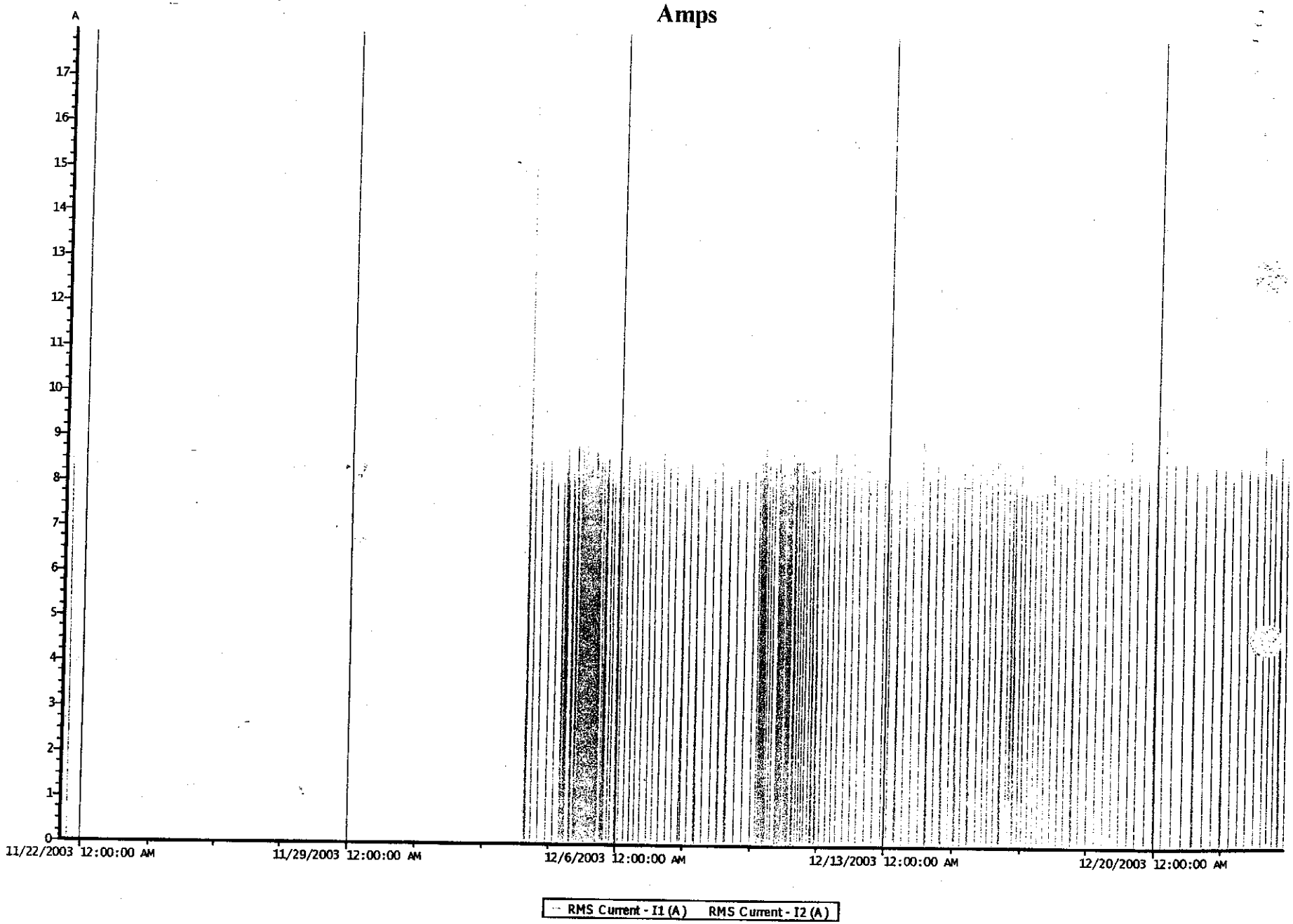
Benjamin D. Miller, PE

Watts



Start: 11/21/2003 11:34:11 AM End: 12/23/2003 10:19:11 AM
1550 Blue Island

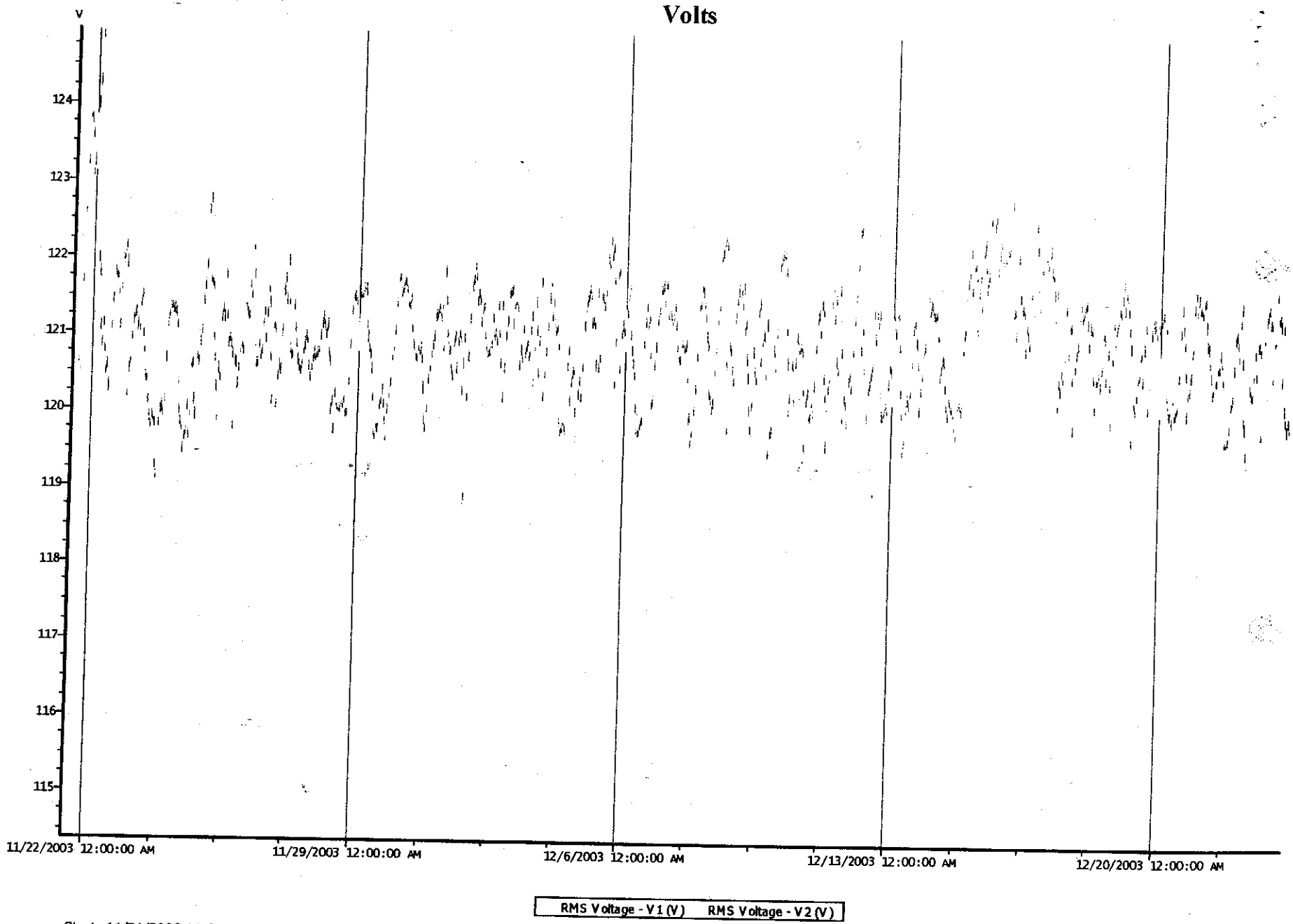
Amps



Start: 11/21/2003 11:34:11 AM End: 12/23/2003 10:19:11 AM
1550 Blue Island

Location: 1550 Blue Island

User Id: Flisl



Start: 11/21/2003 11:34:11 AM End: 12/23/2003 10:19:11 AM
1550 Blue Island

Location: 1550 Blue Island

User Id: Flisk

B. MILLER ENGINEERING

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ENGINEERING REPORT

Electrical Metering Investigation
Report #2

1550 S. Blue Island
Chicago, IL

July 2, 2003

Prepared By:
Benjamin D. Miller, PE

This will report the results of measurements of electrical consumption at the subject building. I monitored both the single-phase and three-phase systems with data loggers that were calibrated and verified within the manufacturer's specified accuracy of 1%. Attached charts show the actual logger data for amps and kW.

SINGLE-PHASE SYSTEM

Total consumption was measured from 3/4/03 - 4/3/03. The results show that there was no load during the entire test period on line 1. Line 2 showed current draw only when the lights were on in the basement & vault area, approximately 8.5 amps or 1000 watts for very short times. Normally, this would be the only consumption on the single-phase system.

On 3/17, the building installed a temporary pump to control flooding. This resulted in a steady load of approximately 6.9 amps, 550 watts, from 3/17 through 3/29, when it was removed.

Data logger results:

Total kWh during the test period - 144.5
Maximum 30-minute demand - 1.57 kW

Utility meter results:

Start – 0899
Finish – 0925
Net for test period – 26 (see comments below)

THREE-PHASE SYSTEM

The three-phase system consists of three different loads. See my original report dated April 4, 2003 for a discussion of this. Consumption was measured from 3/21/03 - 4/22/03 on the Nextel & US Cellular circuits combined. The Beatrice load was too low to measure.

Data logger results:

Total kWh during the test period – 6,550
Maximum 30-minute demand – 11.92 kW

Utility meter results:

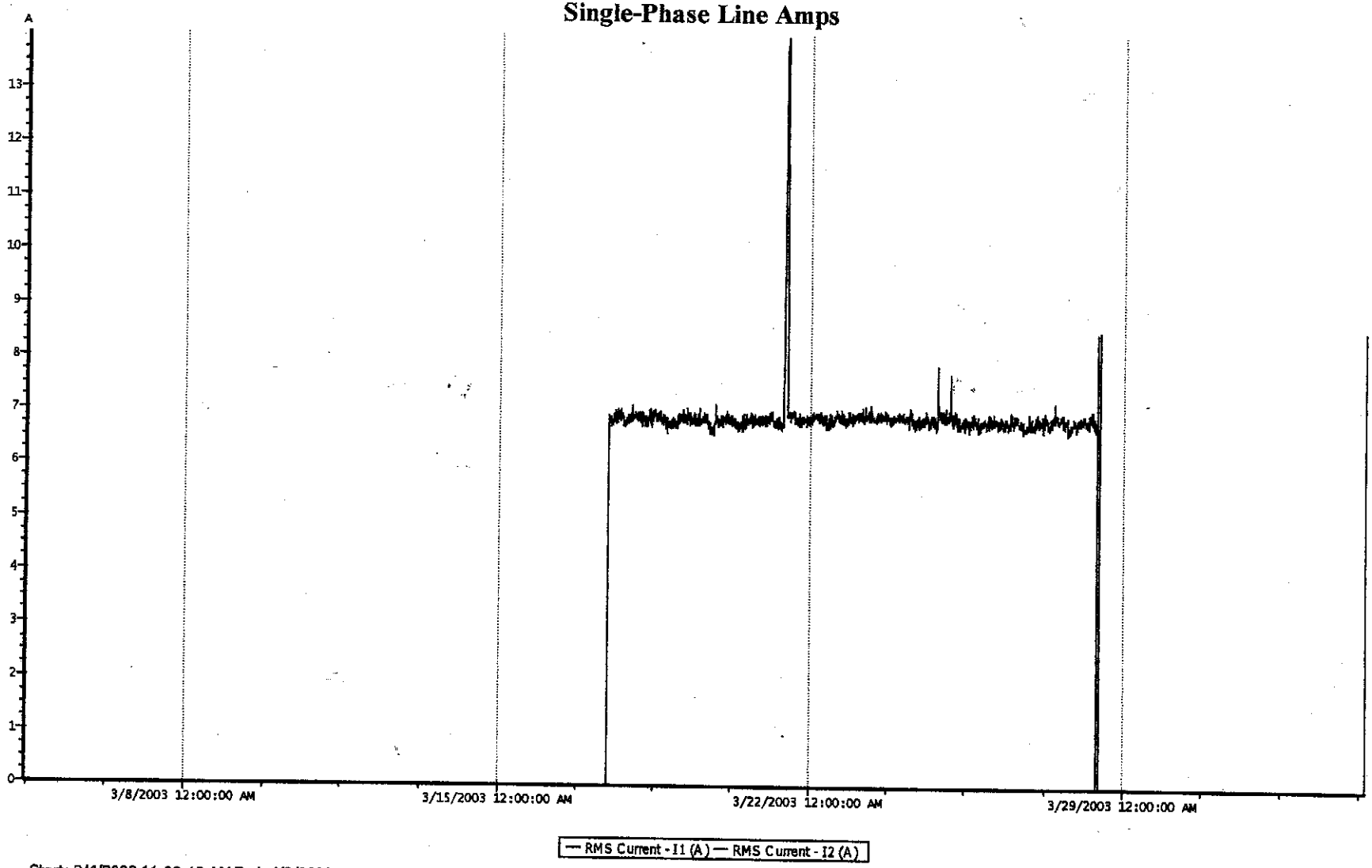
Start – 0688
Finish – 0728
Net for test period – 40 (see comments below)

I have not verified the accuracy of the Com Ed meters, as we never had the planned calibration session. Com Ed has not provided information about the meter multipliers, and it is therefore impossible to relate the readings to actual consumption.

CONCLUSIONS

The single-phase consumption in this building is normally negligible. The only substantial load during the test was the temporary pumps. The three-phase consumption is primarily Nextel & US Cellular, as described in the previous report. I need additional meter information from Com Ed in order to verify those readings.

Single-Phase Line Amps



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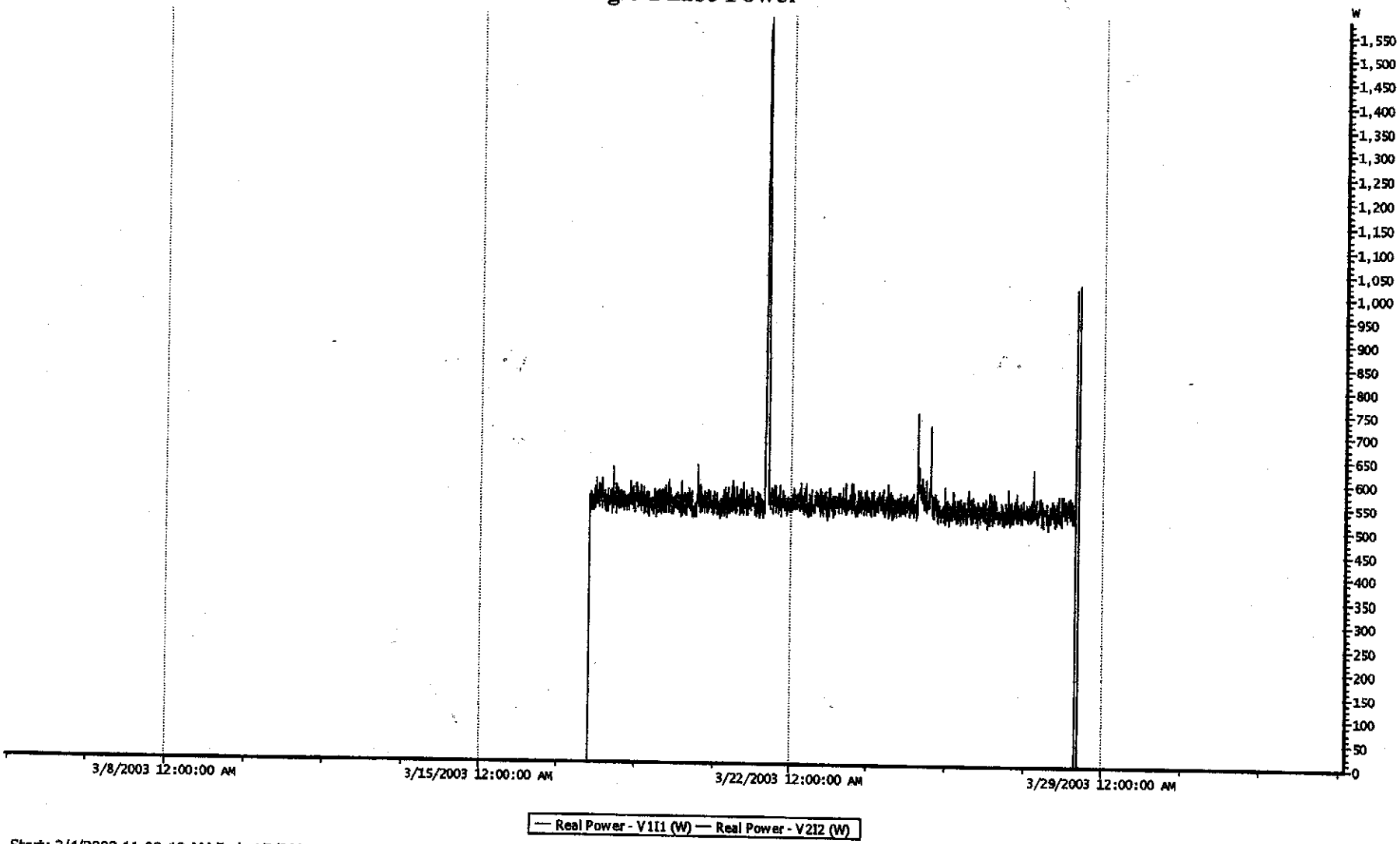
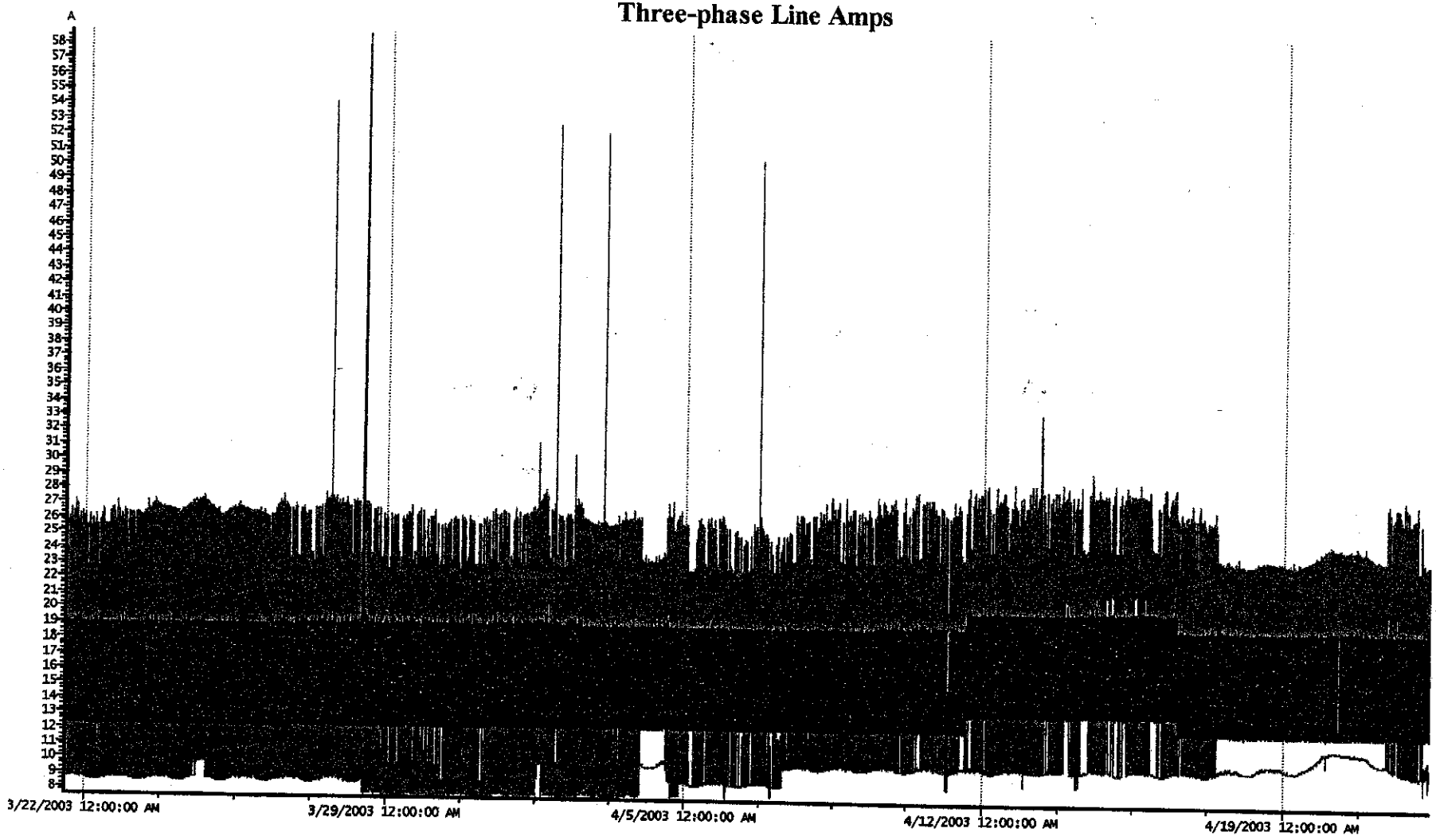
1550 Blue Island

Single-Phase Power



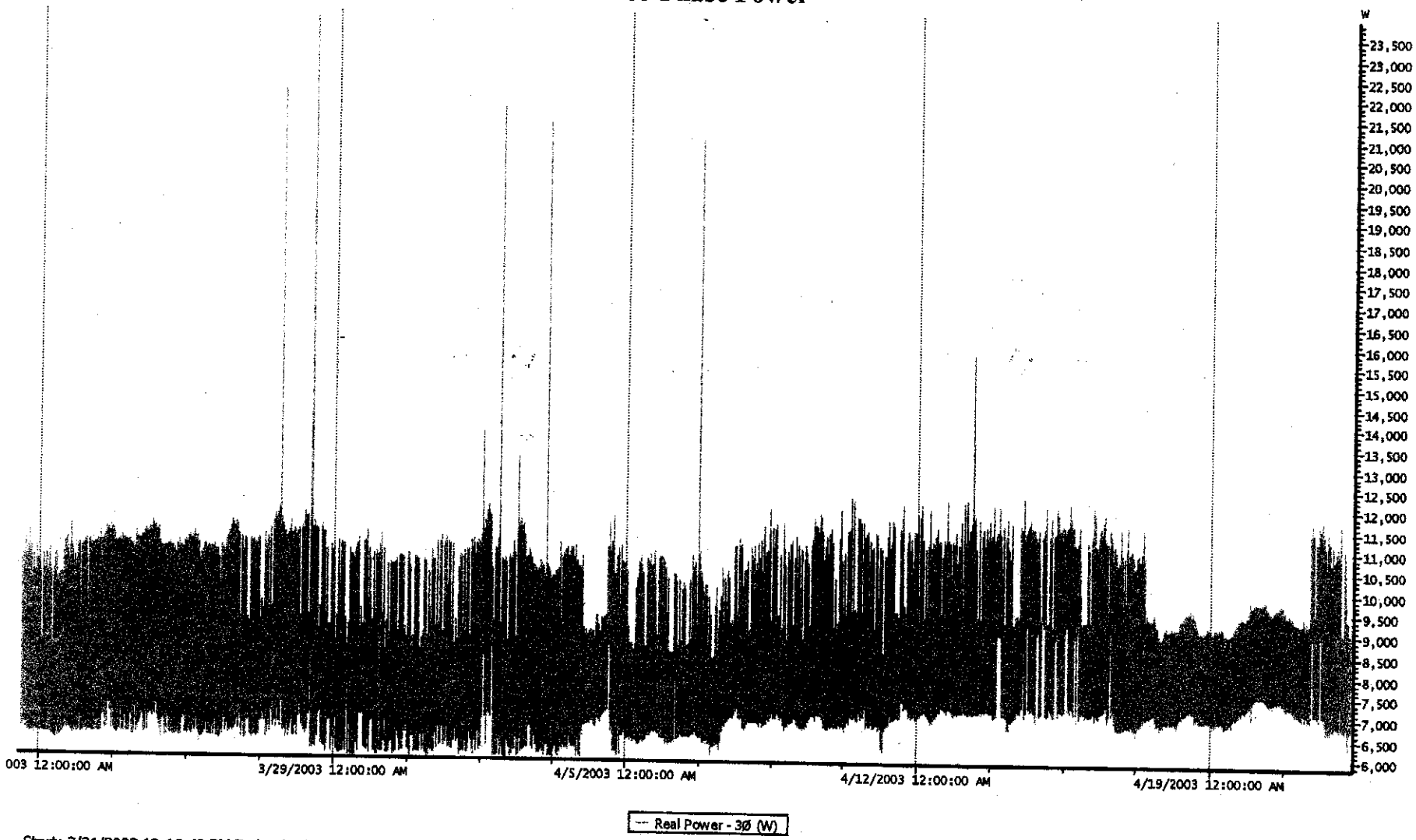
Start: 3/4/2003 11:08:18 AM End: 4/3/2003 9:48:18 AM
1550 Blue Island

Three-phase Line Amps



Start: 3/21/2003 12:16:43 PM End: 4/22/2003 9:36:43 AM
1550 S. Blue Island

Three-Phase Power



Start: 3/21/2003 12:16:43 PM End: 4/22/2003 9:36:43 AM
1550 S. Blue Island

TRANSMISSION VERIFICATION REPORT

TIME : 07/15/2003 16:09
NAME :
FAX :
TEL :
SER.# : BROG2J586692

DATE,TIME	07/15 16:05
FAX NO./NAME	9831770
DURATION	00:03:48
PAGE(S)	12
RESULT	OK
MODE	STANDARD ECM

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FACSIMILE TRANSMITTAL SHEET

TO: Robert Reda, Esq. David Trout, Esq.	FROM: Howard J. Powers II
DATE: 7/15/2003	TOTAL NO. OF PAGES INCLUDING COVER: 12
FAX NUMBER: (312) 983-1770	PHONE NUMBER:
RE: Com Ed	CC:

NOTES/COMMENTS:

Dear Bob and David:

Pursuant to our telephone conversation this afternoon, I have attached the following documents:

1 Commonwealth Edison Account No. 152889014 as summarized by Com Ed;

2 Com Ed Bill for the period 3-11-03 to 4-10-03;

3 Engineering Report from B. Miller engineering (please note that the single phase system was measured from 3-4-03 to 4-3-03 and the three phase system was measured from 3-21-03 to 4-22-03).

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ENGINEERING REPORT

Electrical Metering Investigation

Report #1

1550 s Blue Island
Chicago, IL

April 4, 2003

Prepared By:
Benjamin D. Miller, PE

This report presents the investigation of electrical metering at the subject building ("Beatrice"). Electricity is supplied to the facility at 12,000 volts through a loop which connects to two Com Ed feeders. Three power transformers in the vault supply 480 volt three-phase power, and a single lighting transformer supplies 240/120 volt single-phase. The Beatrice building is currently vacant, with the exception of two tenants, Nextel & US Cellular, who have equipment in operation there.

Beatrice has two revenue meters:

- Three-phase General Electric cat no. 717X021036
  Com Ed BMAG117751109
- Single-phase General Electric cat no. 721X006048
  Com Ed BMIG094483521

Appendix A contains a one-line representation of the secondary electrical system, and *appendix B* contains photos that will be referenced in the report.

Three-phase distribution

Figures 1, 2, and 3 show the 480 volt distribution in the vault. The power transformer secondaries supply bus bars at point "A" which continue to the wall at point "B". Point "C" contains two metering current-transformers and a conduit which provides the current and potential signals to the Beatrice meter. It should be noted that any loads ahead of point "C" will not affect the Beatrice meter, while any loads downstream will. There are no taps off of the supply bus ahead of point "C". From point "C", a feeder cable carries power to another bus further to the left, at point "D". Three sets of feeders connect to the bus at point "D". They are:

- US Cellular power feed at "E"
- Nextel power feed at "F"
- Beatrice power feed at "G"

All three of these loads are downstream of the current transformers at "C", and all three will therefore register on the Beatrice meter.

Figure 4 shows that both the US Cellular and Nextel feeders have meter sockets on the opposite side of the wall, but both sockets are jumpered without meters installed. Therefore, the only meter that is measuring the US Cellular and Nextel loads is the Beatrice meter. It is unlikely that either of these companies is being billed, as there is no way to measure their consumption.

Single-phase distribution

Single-phase 240/120 volt distribution is shown in *figure 5*. The lighting transformer feeds a bus bar on the wall, which contains the metering transformers. Cables from the bus bar feed a series of disconnect switches and other single-phase loads. The battery charger is tapped into the supply bus ahead of the metering transformer, and does not affect the Beatrice meter.

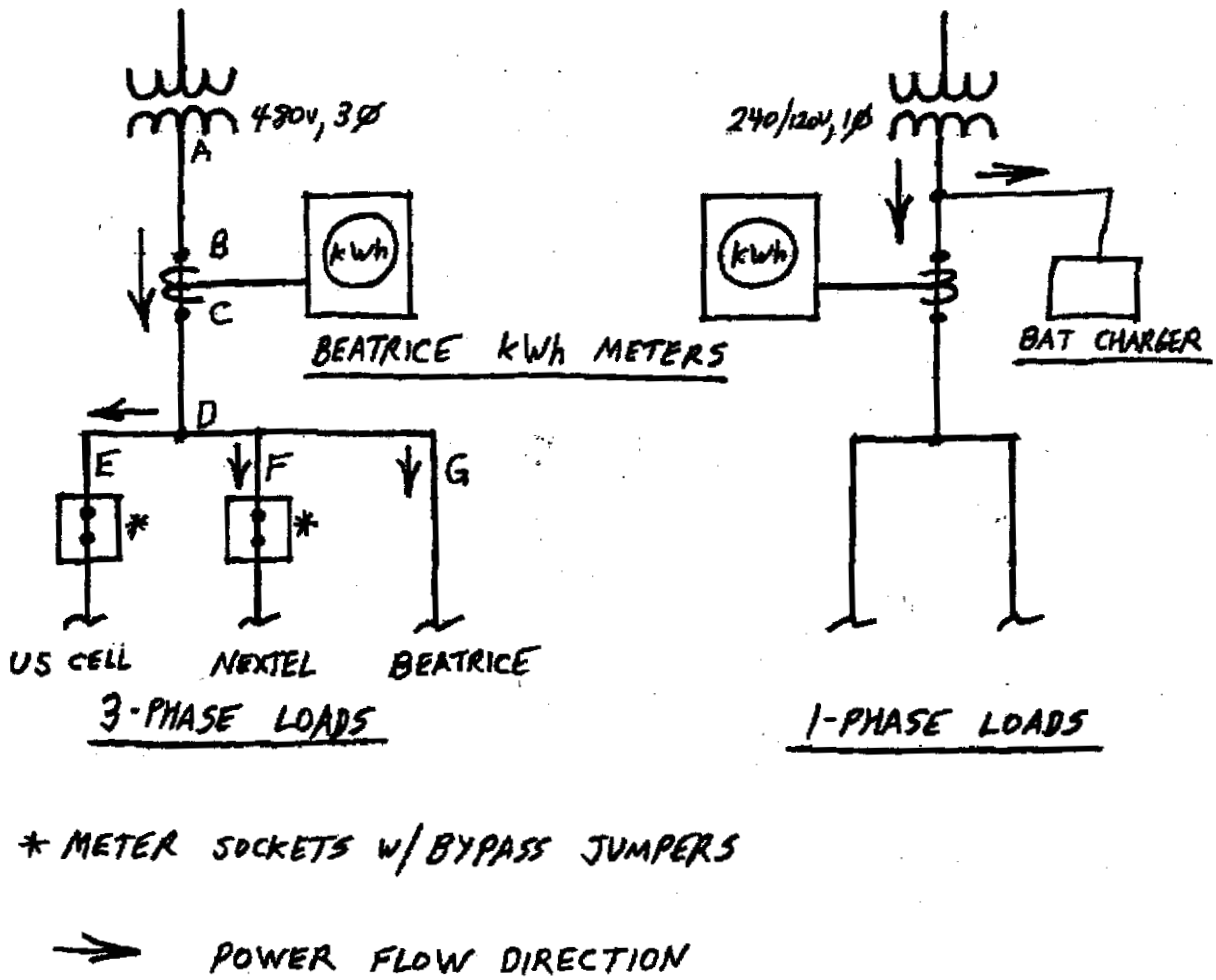
Beatrice meters

Figures 6, 7, and 8 show the Beatrice meters. Labels on the cabinets indicate that these have been replaced multiple times. The current transformer ratios and other information are missing from the meter data plates.

Electrical consumption data is currently being collected independent from the utility revenue meters, on both the single-phase and three-phase systems. This data will be presented in a separate report upon completion of those tests.

APPENDIX A

1550 S Blue Island
Low-voltage schematic



APPENDIX B

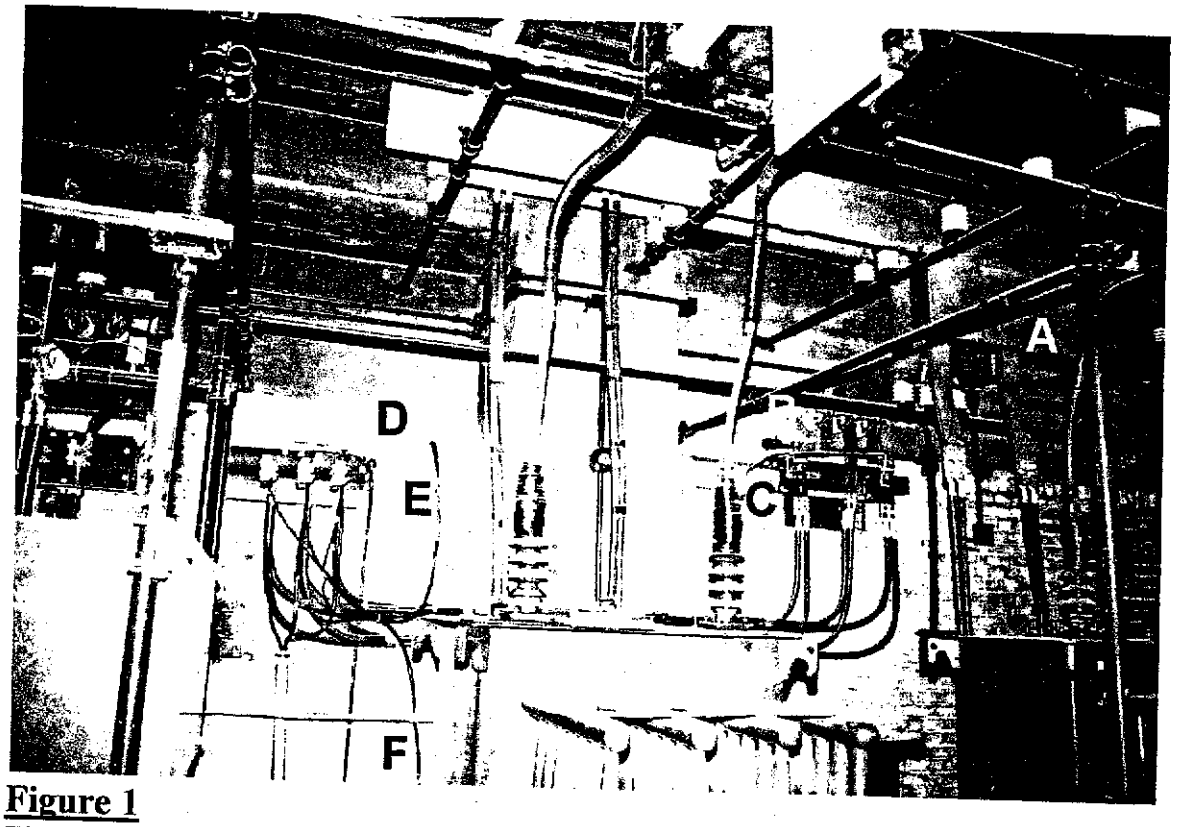


Figure 1
Three-phase 480 volt distribution

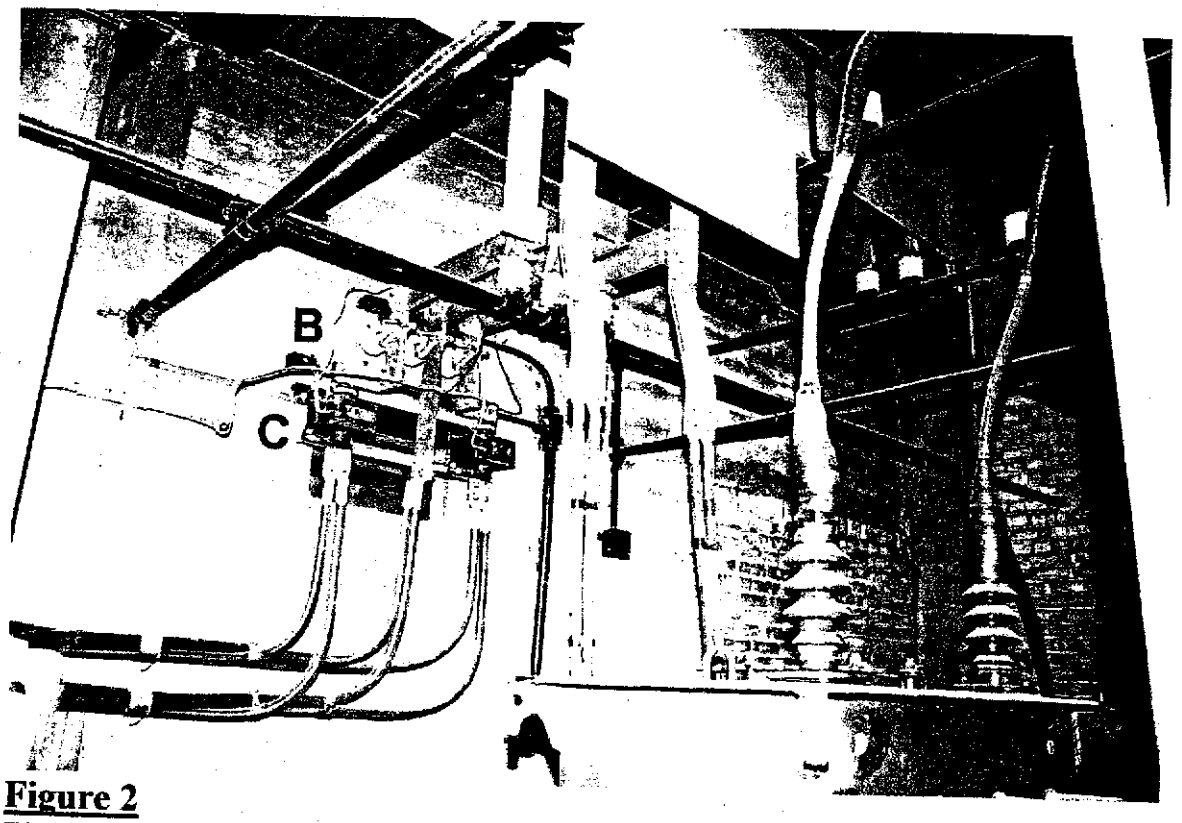


Figure 2
Three-phase 480 volt distribution, supply end

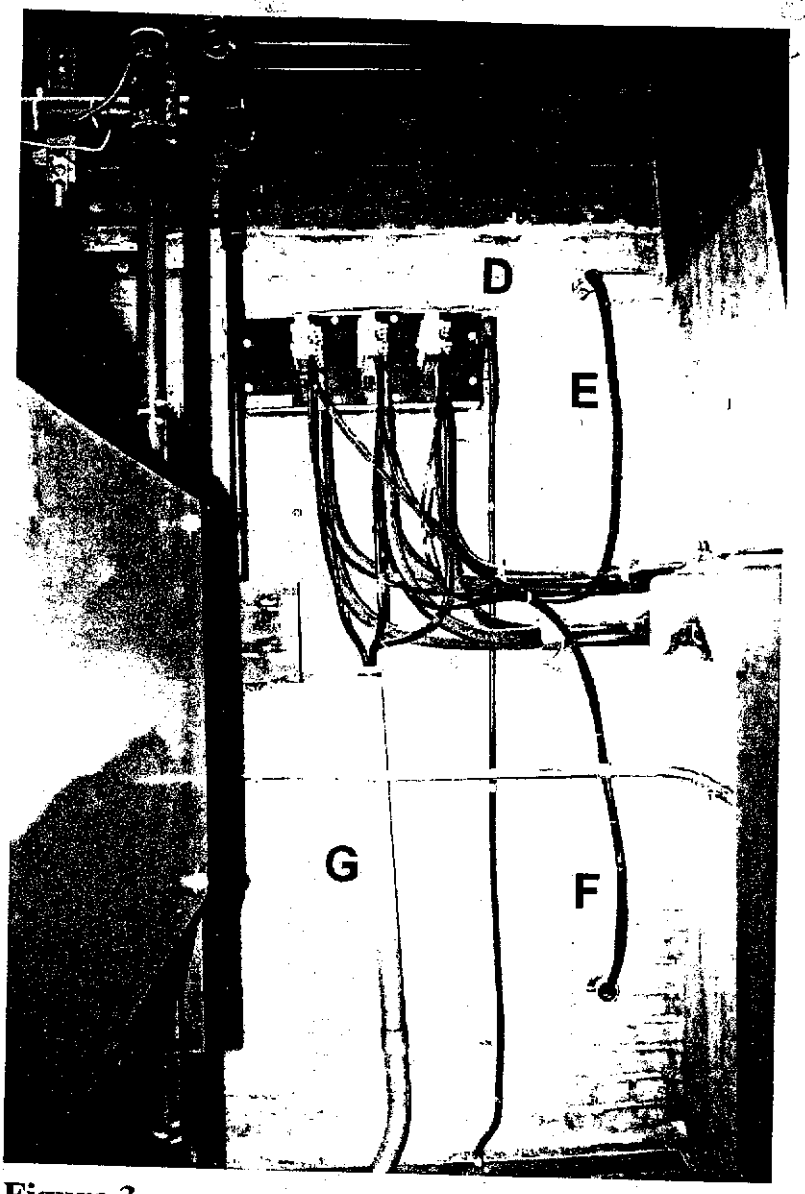


Figure 3
Three-phase 480 volt distribution, load end

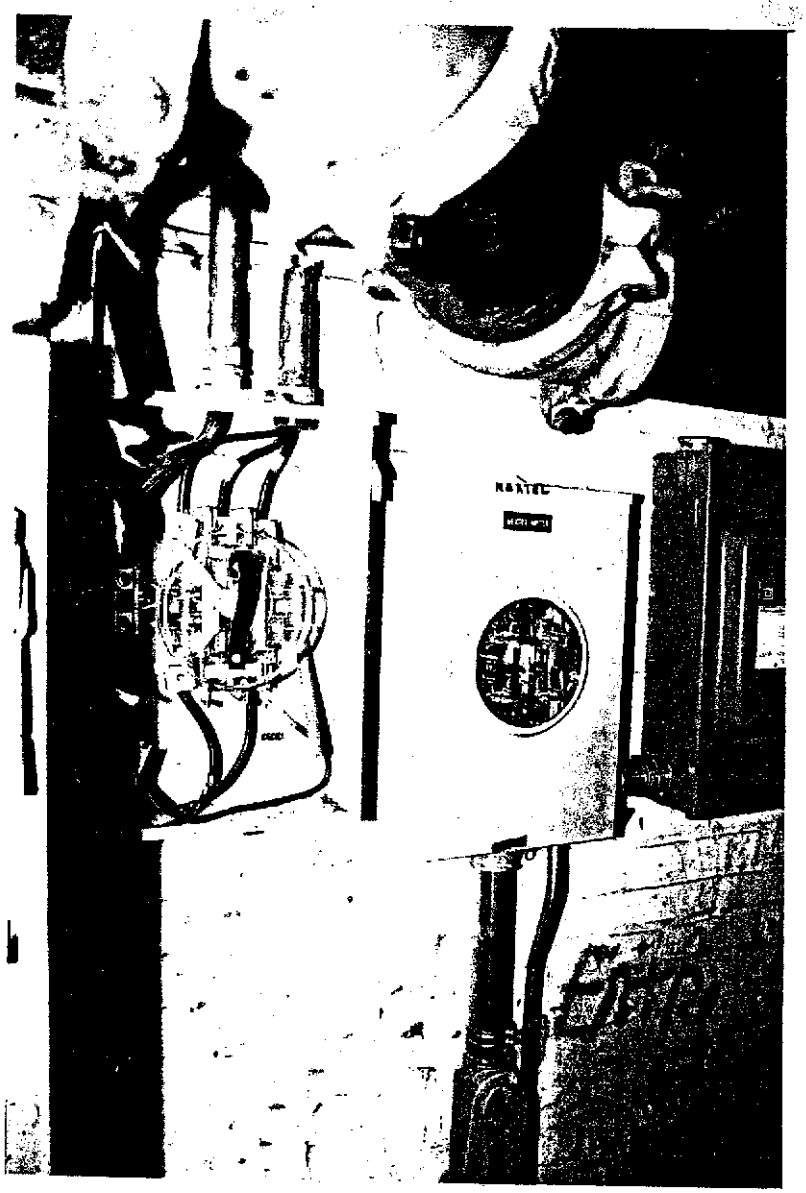


Figure 4
Nextel & US Cellular meter sockets.

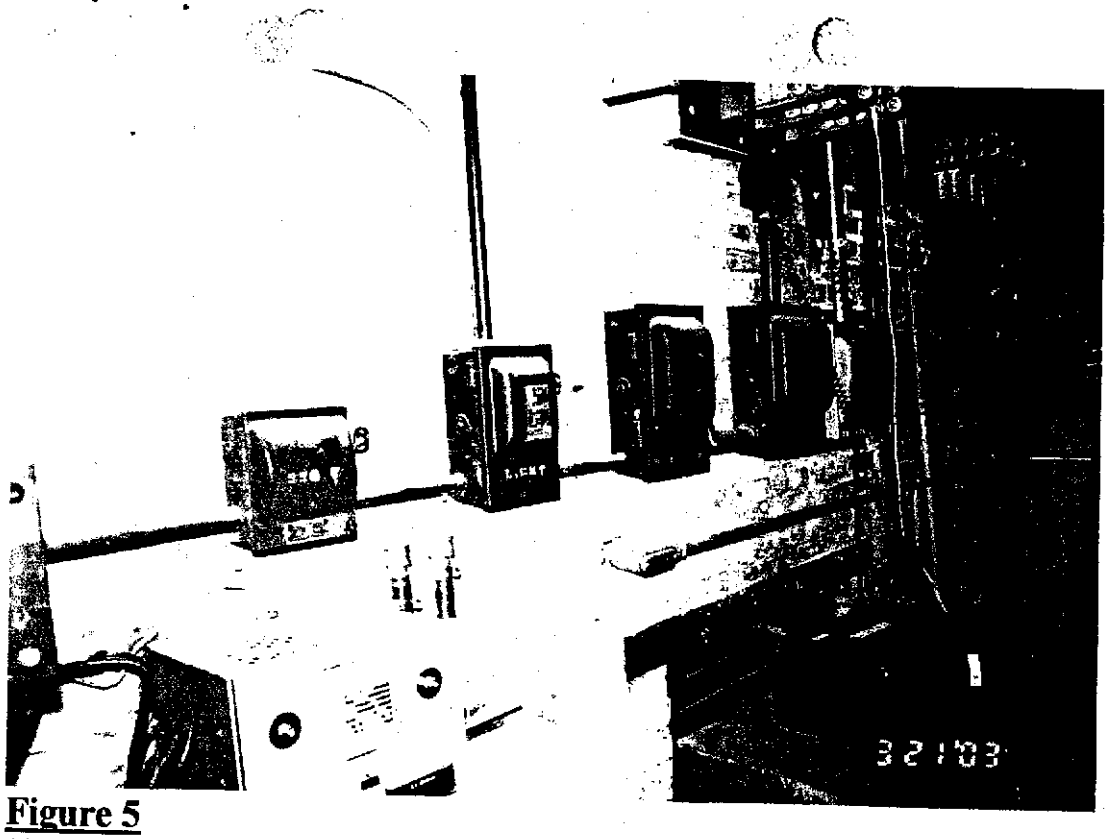


Figure 5
Single-phase distribution

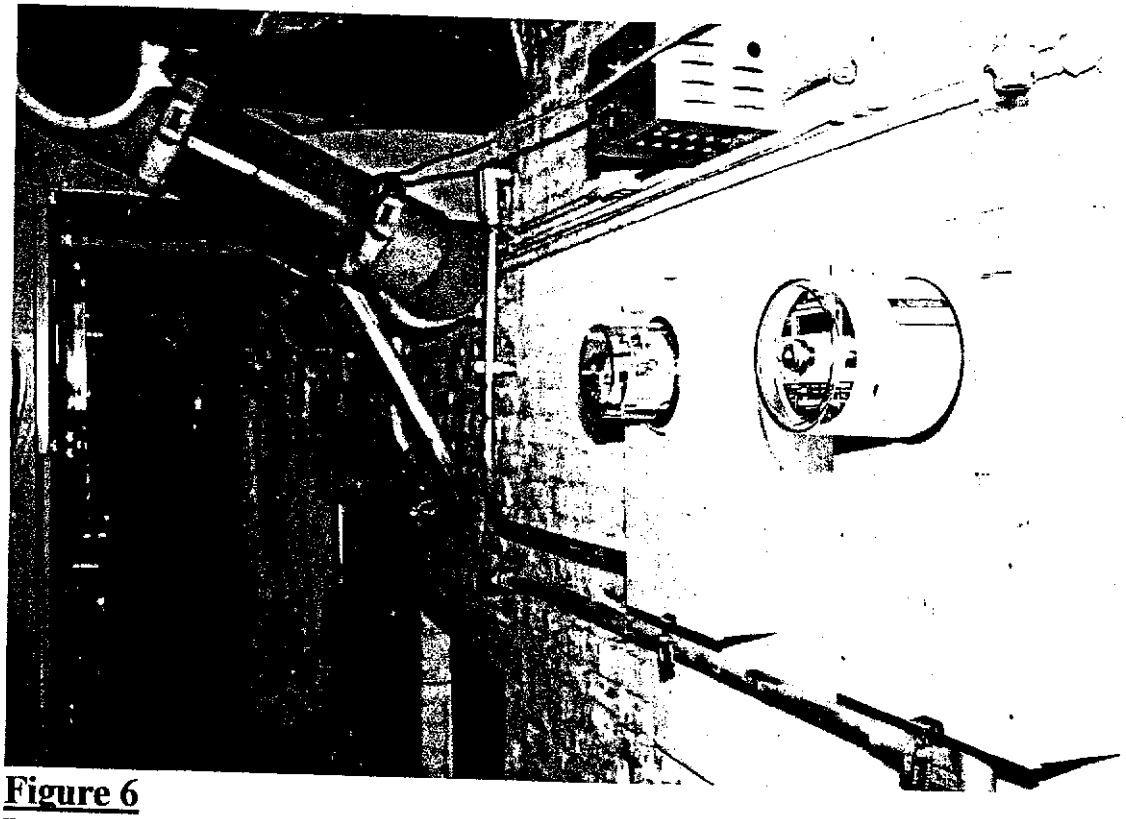


Figure 6
Beatrice meters

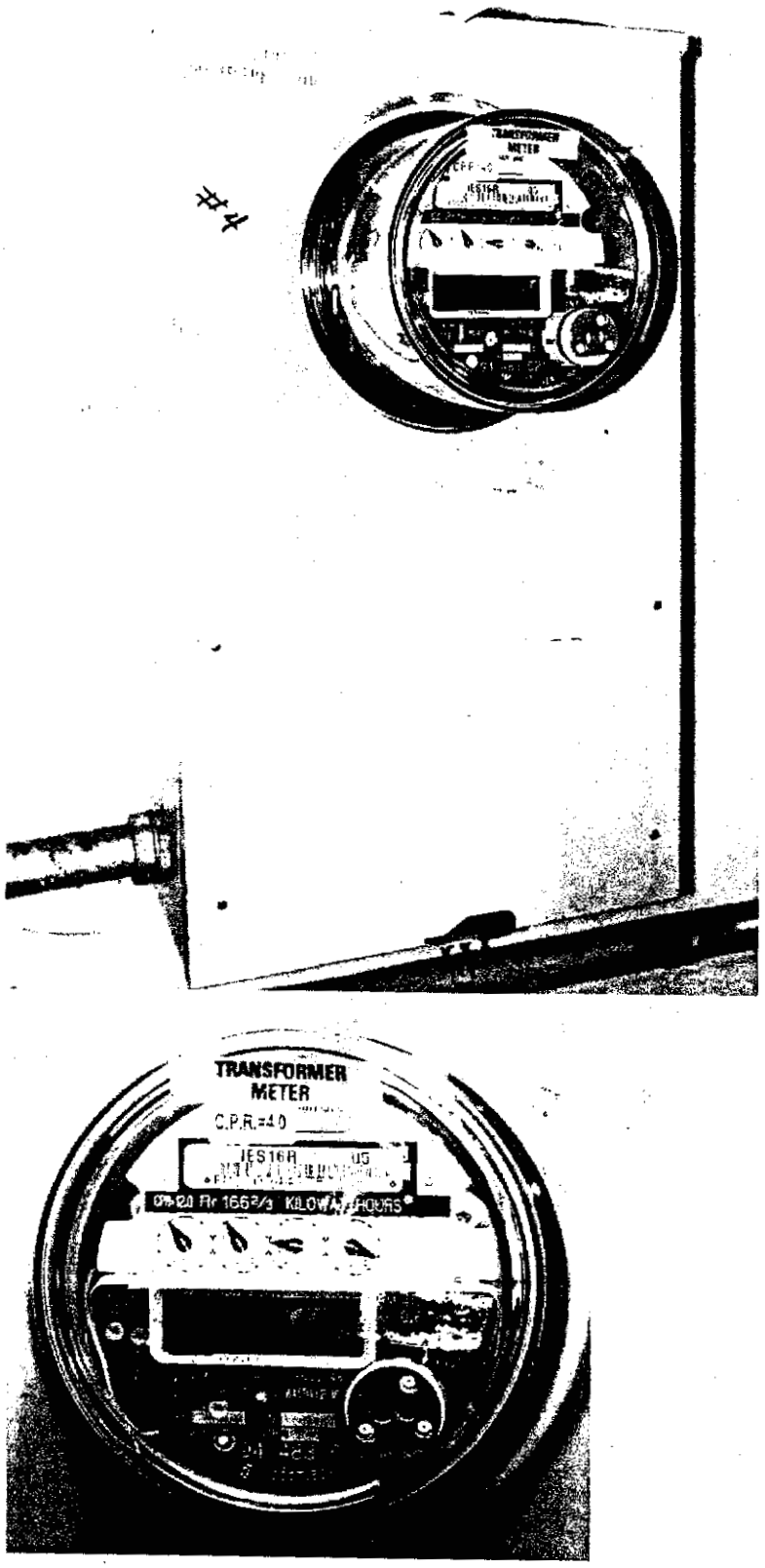


Figure 7
Beatrice single-phase meter

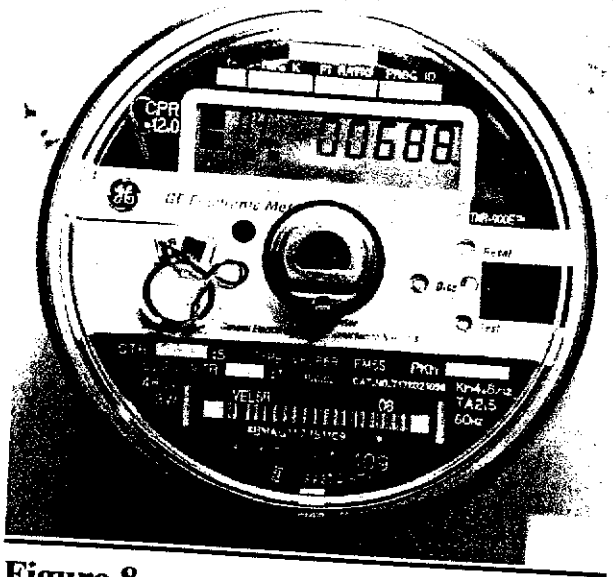


Figure 8
Beatrice three-phase meter

B. MILLER
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e-mail: ben@bmillerengineering.com

CURRICULUM VITAE

Benjamin D. Miller, P.E.

EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY, B.S.E.E., 1972

UNIVERSITY OF IOWA, Two week Executive Development Program, June 1992

SEMINARS ATTENDED

Managing Change and Leadership, IMI Cornelius Corporation, March 6-8,1995

Strategic Planning, IMI Cornelius Corporation, various sessions 1992-1995

Quality Function Deployment, IMI Cornelius Corporation, various sessions 1992-1995

Concurrent Engineering, University of Wisconsin, June 17-19,1992

Failure Mode and Effects Analysis, Coca-Cola Company, 1991

Senior Management Seminar, National Association of Food Equipment Manufacturers, June 1989

Managing for Productivity, Midwest Industrial Management Association, May 5, 1987

EMPLOYMENT

B. MILLER ENGINEERING, Deerfield, IL, 1995 - Present
President & owner. Consulting firm specializes in product and technology development, industrial electrical systems, refrigeration systems, controls, product safety, and electrical training. See supplemental information regarding the wide range of services offered.

REMCOR PRODUCTS CO., Glendale Hts., IL, 1973 – 1995
Served in various engineering management capacities. The last position was Vice President of Engineering, responsible for all product development and engineering activity. Managed a department of 22 technical professionals. Products included ice and beverage dispensers, icemakers, water chillers, various commercial appliances, and industrial refrigeration & process equipment.

J. E. WATKINS COMPANY, Maywood, IL, 1968 – 1973
Manager of Engineering, responsible for designing, installing, & testing industrial ammonia and Freon refrigeration components & systems. Equipment ranged from one to approximately 1000 tons refrigeration capacity for use by the food processing, cold storage, meatpacking and dairy industries.

PROFESSIONAL AFFILIATIONS

NATIONAL ASSOCIATION OF FOOD EQUIPMENT MANUFACTURERS (NAFEM). Member 1990-1994.
Technical Liaison Committee

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS (NSPE). Member since 1995.
Local chapter executive board since 1995
Local chapter president 1997-1999

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE). Member since 1996.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME). Member since 1996.

NATIONAL ACADEMY OF FORENSIC ENGINEERS (NAFE). Correspondent since 1997.

IEEE Chicago/Rockford Consultants' Network. Member since 1999.
Chair 2003 -

ACADEMIA

OAKTON COMMUNITY COLLEGE, Des Plaines, IL. Adjunct faculty since 1998.
Courses taught:
Programmable Logic Controllers (PLCs)
Advanced Programmable Logic Controllers
Blueprint reading
Geometric Dimensioning & Tolerancing (GD&T)
OSHA Regulations
Electrical Safety
Technology in Manufacturing (Includes topics on industrial PCs, CAD, PLCs, CNC programming, robotics, sensors, and hydraulics/pneumatics)

LICENSES

Licensed Professional Engineer in Illinois since 1985.

PATENTS

US 4,227,377 *Control system for ice dispenser and method*

US 4,346,824 *Ice dispensing mechanism*

US 4,513,892 *Flaked ice dispenser*

US 4,753,081 *Air sparge system for icemaker and ice dispenser combination and method*

US 4,803,847 *Control system for icemaker and ice dispenser and method*

US 4,856,682 *Hopper and agitator assembly for an ice dispenser*

US 4,909,047 *Beverage dispensing system*

US 4,921,149 *Ice portion control for ice dispenser and method*

US 4,946,073 *Beverage and ice dispensing method and apparatus*

US 4,951,719 *Automatic postmix beverage dispensing system with flavor indicators*

US 4,967,932 *Postmix beverage dispensing system with warm water purging and method*

US 5,058,630 *Automatic beverage dispensing system with programmable cup drop*

US 5,058,773 *Beverage and ice dispensing method and apparatus*

USD 326,385 *Automatic beverage dispenser*

US 5,072,859 *Beverage dispensing system with clear drink purge and method*

US 5,141,130 *Beverage dispensing system with warm water purging*

US 5,299,427 *Ice transport and dispensing system*

US 6,100,518 *Method and apparatus for dispensing a liquid into a receptacle*

PUBLICATIONS & PRESENTATIONS

1) *"Capacitance Measurements"*, April 1998 issue of Antique Radio Classified magazine.
2) *"Patents and the Independent Inventor"*, presented to IEEE Consultants Network workshop Oct. 17, 1998.
3) *"Electrical Workplace Safety"*, presented to IEEE Chicago/Rockford Consultants Network Nov. 22, 1999.
4) *"The Fundamentals of Grounding & Bonding"*, March 2000 issue of Plant Engineering magazine.
5) *"Basics of Flywheel UPSs"*, May 2000 issue of Plant Engineering magazine.
6) *"Electrical Workplace Safety"*, presented to North Suburban ISPE Sept. 20, 2000.
7) *"The Consultant as an Expert Witness"*, presented to IEEE Consultants Network Sept. 29, 2003.
8) *"Testing, testing: What you need to know about electrical testing safety"*, April 2004 issue of Plant Services Magazine.

TESTIMONY, FORENSIC & EXPERT WITNESS

1) BRILL vs. McDONALD'S CORP. Age discrimination suit by employee against former employer. Testified as witness of fact. Deposition details no longer known, approx. 1990.

2) REMCOR PRODUCTS CO. vs. SCOTSMAN GROUP ET AL. US District Court, Northern district, Eastern Division, case no. 93C1822. Employer patent infringement suit against competitor. Testified as witness of fact. Deposition Oct. 15, 1993, Sabrina Lewis, C.S.R

3) REMCOR PRODUCTS CO. vs. SERVEND INTERNATIONAL, INC. Patent infringement. US District Court, Northern district, Eastern Division, case no. 93C1823. Employer patent infringement suit against competitor. Testified as witness of fact. Deposition June 16, 1995, Corinne T. Marut, C.S.R No. 84-1968.

4) SAPARITO vs. COMMONWEALTH EDISON ET AL. Circuit Court of Cook County, case no. 94L13170 Maintenance worker on building exterior injured by contact with power line. Retained as expert for the plaintiff, and issued a report in October 1998. Case settled prior to deposition.

5) RUFFINO vs. SALTON/MAXIM HOUSEWARES, INC. Victim burned while using bread maker. Retained as consultant for the plaintiff. Performed preliminary inspection of product January 1999. No

report or testimony.

6) Industrial press accident. Retained by Hartford Insurance as a consultant for the defendant, November 1999. Ongoing case, no report or testimony to-date.

7) Industrial press accident. Retained by Hartford Insurance as a consultant for the defendant, December 1999. Ongoing case, no report or testimony to-date.

8) Industrial ground beef mixing machine accident. Retained by Hartford Insurance as a consultant for the defendant, December 1999. Case settled. No report or testimony.

9) Conveyor accident. Contract employee killed while working on the conveyor. Retained as a consultant by the contract company's insurance carrier, Specialty Risk Services, and issued report May 2000.

10) MAR-COR INDUSTRIES, INC. vs. CENTURY DESIGN COMPANY. Cook County Circuit Court, case no. 96L07571. Case concerns the design of equipment for a film wash and silver recovery system. Retained as an expert for the defendant. Issued report May 25, 2000. Deposition September 7, 2000, Joyce Fancsalzki, CSR No. 084-003068. Case settled.

11) ANDREA FONTANA vs. FOX VALLEY SYSTEMS, INC. Circuit Court of the Nineteenth Judicial Circuit, McHenry County, IL, case no. 99LA137. Case involves alleged electric shock & burn. Retained as an expert for the plaintiff. Issued report August 28, 2000. Deposition October 4, 2000. Details of this case are under a protective order.

12) BRYAN REAL vs. BUNN-O-MATIC CORP. US District Court, Northern District of Illinois, case #99C3751. Patent infringement case concerning an automatic beverage filling system that used powdered concentrate. Retained as an expert for the plaintiff August 1999. Case settled.

13) Industrial press accident. Contract worker injured while operating the press. Retained as a consultant by the contract company's insurance carrier, Specialty Risk Services, and issued report April 2001.

14) BARNIKEL vs. JAN, d/b/a/ ALL THE RIGHT STUFF. Supreme Court of the State of New York, County of Nassau, Index No. 035413/96. Service technician injured while repairing a frozen yogurt machine. Retained as an expert for the defendant. Court testimony March 12-13, 2002.

15) Dishwasher fire. Retained as a consultant by State Farm Insurance. Issued report July 2002.

16) Refrigerated warehouse product spoilage. Retained as consultant for defendant's insurance company.

17) Electric shock. Electrician injured while working in switchboard. Retained as consultant for the plaintiff.

18) Electrocution. Electrician killed while working in panel. Retained as consultant for the plaintiff.

19) Refrigerator fire. Retained as consultant for the plaintiff.

20) Electrical fire. Investigated coffee maker. Retained as consultant for the defendant, and issued report March 2004.

B. MILLER
ENGINEERING

PO Box 483 Deerfield, IL 60015
Phone: (847) 948-7746 Fax: (847) 948-7340
information@bmillerengineering.com

ELECTRICAL ENGINEERING SERVICES

Industrial Controls

- Circuit design
- Machine safety
- Troubleshooting
- Process controls
- PLC programming
- Operator interfaces

Electrical Safety

- Code compliance
- OSHA

Forensic Engineering

- Electric shock
- Machine accidents
- Appliance accidents
- Electrical fires

Electrical Training

- Basic electricity
- Industrial electricity
- Electrical safety
- PLC programming

Power Systems

- System analysis
- Power quality
- Energy audit
- Protection coordination
- Grounding

Approval agencies

- Pre-submittal review
- Testing & submittal

We also offer a variety of other engineering, product-design and prototyping services. Please contact us for more information.

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ENGINEERING

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ELECTRICAL MAINTENANCE & SAFETY TRAINING

OSHA requires training for all workers who may be exposed to electrical hazards and additional training for anyone who works on or near exposed energized parts. OSHA will fine employers for non-compliance!

B. MILLER ENGINEERING can provide training seminars and workshops, safety surveys, code compliance reviews, and assistance implementing your electrical safety program.

SAMPLE TOPICS

Basic Electricity	DC circuits, Ohm's Law, AC power, electrical components, wiring diagram symbols.
Industrial Power	Three phase power, Y and delta connections, grounding & bonding, circuit protection, wiring diagrams.
Electrical Safety	Grounding, test equipment, codes and standards (OSHA), hazard recognition, personal protective equipment, lockout/ tagout procedures.
Industrial Machines	Ladder diagrams, motors, controls, power supplies, and other components.
Electrical Testing	Test equipment, testing procedures, system & component troubleshooting. (hands-on practice)
PLC introduction	Hardware, troubleshooting, ladder logic, operator interfaces. In-depth training on specific brands.

Certain training in the area served by Oakton Community College in Des Plaines, IL may be provided through them due to my adjunct faculty affiliation.

All training is flexible in terms of content, length of classes, etc. We would be happy to develop a customized program to meet your requirements. Please call us to discuss how we can serve your electrical training needs.

Visit us on the web at www.bmillerengineering.com

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

BEATRICE ASSOCIATES,	)	
	)	
Complainant,	)	
vs.	)	No. 03-0763
	)	
COMMONWEALTH EDISON,	)	
	)	
Respondent.	)	

TABLE

July, 1999	$21,997.93
August, 1999	$19,301.52
September, 1999	$13,979.59
October, 1999	$18,374.40
November, 1999	$16,638.63
December, 1999	$18,467.82
January, 2000	$ 4,158.67
February, 2000	$ 4,133.69
March, 2000	$ 4,021.27
April, 2000	$ 4,383.26
May, 2000	$ 4,140.05
June	
July, 2000	$ 4,243.10
August, 2000	$ 3,802.35
September, 2000	$ 4,117.07
October, 2000	$ 3,758.29
November, 2000	$ 3,473.04
December, 2000	$ 4,174.28
January, 2001	
February, 2001	$ 3,326.73
March, 2001	$ 4,040.42
April, 2001	$ 3,318.27
May, 2001	$ 4,152.71
June, 2001	$ 4,054.17
July, 2001	$ 4,103.61
August, 2001	$ 3,747.63
September, 2001	$ 3,625.67
October, 2001	$ 3,663.28
November, 2001	$ 3,552.87
December, 2001	$ 4,341.71
January, 2002	$ 1,561.44
February, 2002	$ 1,384.14

March, 2002	$ 1,055.94
April, 2002	$ 1,142.10
May, 2002	$ 1,126.82
June, 2002	$ 1,091.64
July, 2002	$ 1,367.05
August, 2002	$ 1,824.86
September, 2002	$ 1,320.70
October, 2002	$ 1,448.66
November, 2002	$ 1,367.99
December, 2002	$ 1,465.59
January, 2003	$ 1,426.18
February, 2003	$ 1,441.78
March, 2003	$ 1,287.48
April, 2003	$ 1,214.91
May, 2003	$ 645.29
June, 2003	$ 1,016.00
July, 2003	$ 836.62
August, 2003	$ 580.83
August 29, 2003	$ 985.38
November, 2003	$ 1,727.34
December, 2003	$ 189.33
January, 2004	$ 353.15

JANUARY, 2004 BILL:

OTHER CHARGES:

LATE PAYMENT CHARGES: $148,457.36

CHARGES FOR PREVIOUS BILL:

TOTAL AMOUNT DUE: $259,569.68

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

BEATRICE ASSOCIATES,	)	
	)	
Complainant,	)	
-vs-	)	NO. 03-0763
	)	
COMMONWEALTH EDISON,	)	
	)	
Respondent.	)	

NOTICE OF FILING

TO: SEE SERVICE LIST ATTACHED

PLEASE BE ADVISED that on July 19th, 2004 the Complainant, BEATRICE ASSOCIATES, filed the Direct Testimony, with the Clerk of the Illinois Commerce Commission, 527 E, Capitol Ave., Springfield, IL 62701.

ROBERT HABIB
Attorney for Complainant

ROBERT HABIB
Attorney for Complainant
77 W. Washington St.
Suite 411
Chicago, IL 60602
(312) 201-1421
Attorney No. 13519

CERTIFICATE OF SERVICE

I, ROBERT HABIB, hereby certify that I caused copies of Complainant's Motion to be served on all Counsel, by U.S. Mail or, or personal delivery on the 19 day of July 2004. Or- July 20, 2004

ROBERT HABIB

SERVICE LIST

Felicia Franco-Feinberg
Assistant General Counsel, Regulatory
Exelon Business Services
10 S. Dearborn - 35th Floor
Chicago, IL 60603

Ms. Elizabeth Rolando
Chief Clerk
Illinois Commerce Commission
527 East Capitol Avenue
Springfield, IL 62701

Richard G. Bernet
Assistant General Counsel, Regulatory
Exelon Business Services
10 S. Dearborn - 35th Floor
Chicago, IL 60603

John Parise, Jr.
Sr. Admin - Customer Service Regulatory Affairs
Commonwealth Edison Company
227 West Monroe
Chicago, Illinois 60606

Administrative Law Judge Glennon Dolan
Illinois Commerce Commission
160 N. LaSalle
Chicago, Illinois 60602

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

BEATRICE ASSOCIATES,	)	
	)	
Complainant,	)	
-vs-	)	NO. 03-0763
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